



FABRIQUES DE TABAC REUNIES SA.

RESEARCH AND DEVELOPMENT

MONTHLY REPORT

Strictly Confidential

AUGUST 1981

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LIST OF SUBJECTS COVERED

I. RESEARCH

1. Special Events
2. Biotechnology
3. Chemical and Analytical Services
4. Special Projects

II. PROCESS DEVELOPMENT

5. Nitrate Reduction
6. Pilot Plant Operations
7. Reconstituted Tobacco
8. Unit Operations
9. Special Projects

III. PRODUCT DEVELOPMENT AND QUALITY ASSURANCE

10. Cigarette Development
11. Product Development Laboratory
12. Material Development
13. Tobacco Studies
14. Flavour Development
15. Material Testing
16. Cigarette and Smoke Analysis
17. Q.A. Analytical Services
18. Special Projects

IV. MISCELLANEOUS

19. Specifications
20. Process Assurance
21. Instrumentation and Process Automation
22. Documentation and Library
23. Patents
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Key to Distribution:

- A. Complete Report
- B. All except Research Report
- C. All except Special Projects Research and those reports which might interfere with patent considerations
- D. Subject No 9, 12, 15, 17, 18, 19, 21, 24
- E. Subject No 10, 12, 15, 17, 19, 21

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PROJECT TITLE : PROTAGORAS
PERIOD COVERED : JULY 14 - AUGUST 17, 1981
WRITTEN BY : Bindler G-N (GNB)

For the reasons mentioned in the previous monthly report, we decided to concentrate our work on uncut tobacco. In all the experiments described below Mexican Burley strips from lot 3667 were used.

The following preliminary experiments were performed :

- Extraction I : 20 g of Burley strips were extracted with 200 ml of water for 90 min at 60°C (step 1), then the resulting tobacco was re-extracted with KOH for 90 min at 60°C (step 2) and afterwards with water for 180 min at 37°C (step 3).
- Extraction II : The same as extraction I, except that in step 3 the resulting tobacco was extracted with water and 100 mg pronase from Boehringer for 180 min at 37°C.
- Extraction III : The same as extraction I except that in step 1 the tobacco was extracted with 200 ml water and acid at pH 2 for 90 min at 60°C.

Extraction II gave a 40% greater yield of proteins than extraction I and extraction III gave a 25% greater yield than extraction I.

The change from a low pH to high pH gave a very interesting result. This extract will be investigated and an enzyme extraction step will be added to its treatment.

REFERENCES

- 1) Bindler G-N., Notebook 800804
- 2) Mangilli M-F., Notebook 800805



GNB/jig/AUGUST 25 1981

0000144152

PROJECT TITLE : SAVOURY
PERIOD COVERED : JULY 13 - AUGUST 21, 1981
WRITTEN BY : Ghiste-P. (PAG)

The purpose of project SAVOURY is to prepare flavours which, when pyrolyzed with sheet or tobacco give Burley type flavour characteristics.

EVALUATION OF FLAVOURS

The following flavours are currently being evaluated for the following objectives :

1. LTR sprayed with flavour should give the same flavour characteristics as an Italian Burley treated in the Burley line.
2. Greek Burley tobacco, not treated in the Burley line, but sprayed with flavour should give the same flavour characteristics as a US Burley treated in the Burley line.

COMMENTS

Flavour P-13/1 (1) proved to be acceptable and in August the experts from PME-LEAF Dept. confirmed this evaluation (2). This flavour covered the taste of reconstituted tobacco very well and indeed had characteristics close to those of Burley tobacco.

However, an experiment carried out in order to reproduce P-13/1 (2) showed that there was no significant difference between flavours P-13/1 and P-16/1 and they both have a similar taste. The best results were obtained with these flavours when they were applied in the following proportion : 0.3 ml flavour per g of reconstituted tobacco.

Flavour C-39/1 (2) was good in that it covered the reconstituted tobacco taste well, but it was too harsh and acidic. Its after-taste was artificial and unlike tobacco.

Flavour P-15/1 (3) appears very promising as it "darkened" the taste of reconstituted tobacco to make it more like air-cured tobacco. It was also uniform and its intensity constant. It had the disadvantage however of having a slightly fruity after-taste.

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REFERENCES

- 1) Ghiste-P., Monthly Report, March 1981 p 3.
- 2) Ghiste-P., Monthly Report, July 1981 p 4.
- 3) Ghiste-P., Monthly Report, May 1981 p 5.

P. Ghiste

PAG/jig/AUGUST 26 1981

0000144154

PROJECT TITLE : ANALYTICAL INVESTIGATIONS
PERIOD COVERED : JULY 24 - AUGUST 18, 1981
WRITTEN BY : Genoud-Y. (YVG) and Piadé-J.-J. (JJP)

SUGAR ANALYSIS (JJP)

As support to project Savoury, sugars were analysed in various RF samples. No glucose could be found by the combined HPLC/GC (after derivatization) technique. The detection limit of the applied procedure was estimated to be below 100 µg/ml.

CO AND NO (YVG/JJP)

CO and NO in mainstream and sidestream smoke of 26 undiluted prototype cigarettes of Study Compo (1) having different cigarette paper porosities are currently being determined.

Two experimental cigarettes submitted by Biotechnology were analysed for CO and NO (2).

CO mainstream and sidestream smoke deliveries of 5 urea treated experimental cigarettes of project ROSA (urea concentrations between 0 and 10%) were determined (3).

GAS PHASE ANALYSIS (YVG)

On Toimil-R's request a comparative study on the retention of 10 selected organic components of organic gas phase of mainstream smoke, plus CO and NO, by two filters, PELA 06 and PALINKA 07, was carried out.

POLYETHYLENE GLYCOL (YVG)

Investigations to analyse polyethylene glycols PEG 550, 600 and 750, together with TEGDA and triacetin in cigarette filters by GC² (4) after derivitization were completed (5). Results show that PEGs investigated even after trimethylsilylation and under drastic conditions (1 m column, 320°) cannot be analysed by gas chromatography.

FS CAPILLARY COLUMNS (YVG)

Superox 0.1 and 20, two polar phases known to be suitable for coating FS columns, have been received and FS columns were treated with these new phases by applying static coating technique (6).

Two FS capillary columns have been prepared for other groups.

MISCELLANEOUS

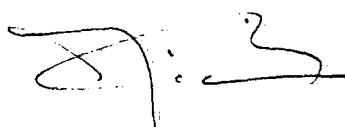
Miss Micheline Niklaus, a technician, joined the Analytical & Chemical Service Group on July 1.

A summer student, Mr. Christian Quellet, was assigned to YVG.

REFERENCES

- 1) Memo from Erkohen-E. to Fink-W., June 24, 1981.
- 2) Report by Genoud-Y. to Schulthess-D., June 7, 1981.
- 3) Memo from Murray-M. to Fink-W., June 25, 1981.
- 4) Genoud-Y. "Triacetin and TEGDA in filter plugs by gas-chromatography" PME Analytical Method, July 1981.
- 5) Quellet-C., Internal Report, August 1981.
- 6) Sandra-P., et al., "Superoxes, high temperature universal phases in (GC)²", HRC and CC, Vol. 2 (1979) pp. 288-292.

YVG/JJP/jig/AUGUST 21 1981



0000144156

PROJECT TITLE : AGRICULTURAL CHEMICALS
PERIOD COVERED : JULY - AUGUST 1981
WRITTEN BY : Speck-M.

ROUTINE PESTICIDE ANALYSES

Number of samples analysed for pesticide residues in
July / August :

ORGANOCHLORINES	60
ORGANOPHOSPHORUS	60
METHAMIDOPHOS	11
DITHIOCARBAMATE	58
MALEIC HYDRAZIDE	62
RIDOMIL	44

MS/jig/August 20 1981

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0000144157

PROJECT TITLE : FIAT
PERIOD COVERED : JUNE 17 - AUGUST 17, 1981
WRITTEN BY : Genoud-Y. (YVG)

The objective of project FIAT is to determine the retention of certain components of cigarette smoke by filters, filter additives and adsorbents. In addition, new and traditional filter additives are investigated using new methods. This is done in order to obtain detailed information on adsorbents which could then be used by the Product Development Department.

FIRST SELECTION OF CIGARETTE SMOKE COMPONENTS TO BE DETERMINED

Inorganic gases : NO, CO, HCN.

Organic volatiles : Aldehydes : acetaldehyde, propanal,
butanal, 3-methyl-butanal, acrolein,
2-butenal

Ketones : acetone, ethylmethylketone,
butenone

Nitriles : acetonitrile, propionitrile

Furan : furan, silvan, 2.5-dimethylfuran

Others : benzene, toluene, isoprene

STUDY OF THE CORRELATION BETWEEN SPECIFIC SURFACES AND RETENTION

In order to know the influence of the specific surface of an adsorbent on the retention efficiency, 4 charcoals having surfaces in the range between 0 - 1800 m²/g were selected. These charcoals, which were of constant granulometry, were put in the cavity of an undiluted PSP filter where the cavity was also kept constant.

As the smoking parameters remain unchanged, we will be able to see the correlation between the surface and delivery of volatile components.

STUDY OF THE CORRELATION BETWEEN DILUTION AND THE ADSORBENT

Cigarette used : MAE

Trial 1 : Standard commercial MAE filter containing silicagel and charcoal, with dilution.

Trial 2 : Same filter as above without dilution.

Trial 3 : The adsorbent is replaced by pumice stone which has no effect on the volatile components of smoke. No dilution.

This study will give information on the effect of an adsorbent in conjunction with dilution in a filter. Following the results of this study, a system which will enable a small number of filters with specific adsorbents and dilutions to be prepared will be made in order to test adsorbents showing interesting properties. Experiments have been started.



Piadé-J.-J.

YVG/jig/AUGUST 25 1981

0000144159

PROJECT TITLE : PILOT-PLANT OPERATIONS
PERIOD COVERED : JUNE 22 - AUGUST 28 1981
WRITTEN BY : Lüthi-N. (NIL)

1. EQUIPMENT

1.1. Extract clean-up

Trials using the rented Sweco vibrator for cleaning up the extract at the outlet of the extractor gave good results.
It was decided to purchase this apparatus with a screen of 450 mesh.

1.2. Rotocell Extractor

1.2.1. The presence of nitrite in the extract during long periods of continuous extraction of strips (1) could be eliminated by adding acid in the feedwater.
This means that the pH of the extract was lowered from about 6.3 to about 5.0.

1.2.2. To obtain a more homogenous distribution of the extract on the strips, the showers of the extractor were replaced by those made in the FTR workshop.

1.3. Fermenter

Due to problems with the sterility of the fermenter the time of sterilization was increased.

2. MAINTENANCE OF THE EQUIPMENT IN THE PILOT-PLANT

The maintenance of the equipment in the Pilot-Plant was carried out in July and August according to plan and was completed on August 28, 1981 (2).
All the equipment was cleaned and overhauled and is now ready for the next trial.

3. LABORATORY

A Siemens instrument was purchased to determine the humidity of tobacco.

In order to know more precisely the amount of acid and base consumed during the trials with the 20-1 fermenter, two Mettler balances were purchased.

4. PERSONNEL

The new operator started work on August 10 and has started his training programme.

5. REFERENCES

1. Lüthi-N : Monthly report (June 1981).
2. "Révision de l'installation-pilote NINO, juillet - août 1981", report from J. Brosy and R. Perrinjaquet, September 1981.

S. Dessouslavy
Dessouslavy-S.

NIL/sde/SEPTEMBER 3 1981

PROJECT TITLE : CIGARETTE DEVELOPMENT 1
PERIOD COVERED : JUNE 27 - AUGUST 21 1981
WRITTEN BY : Singer-Z. (ZDS)

365 BARBARA

Objective

K : 15 mg/cig.
N : 1 mg/cig.
Format : 7.95 / 20 / 84 mm

Summary

Prototype 41 T is being product tested against CAMEL FILTER and MARLBORO DB.
Due to some rumours concerning the lack of impact which could be detected in the first two puffs of the above-mentioned prototype, the German Marketing people came up with a suggestion on how to lessen such a negative characteristic.

Description of samples and results

Two trials were carried out on prototype 41 T by taking the less porous cigarette paper Pela 54 and a non-porous tipping paper.
The description of these two prototypes and their comparison with the original prototype is stated in the table on the next page.
The results of taste evaluation are not yet available.

PROJECT NAME : B A R B A R A

PROJECT NO : 365

PROJECT LEADER : ZDS

DATE : August 24th 1981

PROTOTYPE NO

44 P

45 P

41 T

BLEND NO

DB0136505N25 (containing 11 % of ET) -----

TA	%	1.67	1.67	1.71
NITRATE-NITROGEN	%	0.20	0.19	0.20
REDUCING SUGARS	%	9.9	9.9	9.8
FORMAT : DIAMETER	mm	7.90	7.90	7.93
FILTER LENGTH	mm	21	21	21
CIGARETTE LENGTH	mm	84	84	84
TOTAL WEIGHT	mg/cig.	1025	1015	1020
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	795	783	784
CIGARETTE RTD	mm WG	124	134	114
DILUTION	%	16	0	12
CIGARETTE PAPER		Pela 22 / 54	Wattens 60	Wattens 60
TIPPING PAPER		Z3 / 30	Non-porous	Z3 / 30
FILTER : TYPE		Single	Single	Single
TOW		3.4 I / 46'000 -----		
PAPER		FU-POV 40	FU-POV 40	FU-POV 40
RTD	mm	68		
TAR (K)	mg/cig.	14.3 (12.6)	15.8 (13.8)	14.7 (12.9)
SN (N)	mg/cig.	1.06 (0.91)	1.18 (1.01)	1.03 (0.98)
CO	mg/cig.	17.5	17.3	18.1
NO	mg/cig.	0.20	0.24	0.21
PUFF COUNT		7.6	6.9	9.1

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

0000144163

MASKI

Objective

To launch an American blend cigarette in a 20's or 24's pack having no influence on the MARLBORO RED sales in Germany.

K = 10 - 11 mg/cig.

N = 0.8 mg/cig.

Summary

It was decided to use the standard European MARLBORO LIGHTS (MLY) but with filter or tipping paper modifications in order to bring the analytical figures within the objectives. The tipping paper used should not be wider than 28 mm.

Description of samples and results

Using the MLY blend, two prototypes of different designs were produced in PMG Munich.

Version No		1	3
Format : diameter	mm	7.95	7.95
filter length	mm	21	25
cigarette length	mm	84	84
Cigarette paper		Wattens 60 -----	
Tipping paper		Z4 / 120 eletro-perforated	
Filter : type		BSL - 126	MER - 100
tow		2.5 Y/51'000	2.5 Y/48'000
paper		FU-POV 40 U	FU-POV 40 L
K	mg/cig.	11.2	9.7
N	mg/cig.	0.77	0.68
Puff count		10.7	9.7

The tipping papers used on both versions have the same porosity but different widths :

Version No		1	3
Tipping paper width	mm	25	28
Over-lap	mm	4	3

Until now, the cigarette and tipping paper over-laps have never been shorter than 4 mm. The trial showed that cigarettes with 3 mm over-lap can be produced. However, it should be pointed out that the (industrial) production cannot avoid variations of ± 1 mm, which means that the over-lap obtained is from 2 to 4 mm. The 2 mm attachment of the filter tip to the tobacco column is, in our opinion, not sufficient.

Both versions were submitted to Panel A for taste evaluation. Version No 3 was selected as the only alternative for this project as it is a good quality product, similar in taste and character to MLY. CO/NO analyses are under way in FTR Neuchâtel.

L & M FINLAND

Objective

Transfer of the production of L & M to ATQ.

Description of samples and results

In order to be in line with the Pan-European L & M product, cigarettes were made using the MLF blend and L & M flavours. The non-tobacco materials used were the same as those of the MLF SF.

A cigarette sample of the ATQ first trial was analysed in FTR Neuchâtel and taste evaluated by the expert Panel A in Lausanne.

		<u>L & M</u>	<u>S F</u>
Format	mm	7.89/20/79	
Total weight	mg/cig.	993	
Tobacco weight at 12 % MC	mg/cig.	766	
Total RTD	mm WG	104	
Dilution	%	0	
Tar	mg/cig.	15	
SN	mg/cig.	11.04	
CO	mg/cig.	14.4	
NO	mg/cig.	0.23	
Puff count		8.1	

The analytical results obtained are within the standard.

As regards the physical parameters of the cigarette, the diameter of 7.89 mm is out of the acceptable limits (7.95 +/- 0.05 mm).

As far as the organoleptic characteristics are concerned, the submitted sample gives a softer and milder taste in comparison with the current product.

358 VOITTO

Objective

To re-engineer the existing BELMONT NO 1 cigarette in order to bring the product more in line with the BELMONT family.

Description of samples and results

Using the tobacco blend PMS ex-PMG Munich, cigarette prototypes of various designs were produced. Two prototypes which are within the target figures differ in the cigarette papers used (see table on the next page).

Follow-up

- These two prototypes should be reproduced with a freshly prepared PMS blend containing 006 ET "special composition" (until now, the ET ex-Onnens was used).
- A trial will be carried out with a 110-6 cigarette paper from Mauduit (which replaced the Ecusta 708 for the PMS production).
- A trial will be carried out with a single acetate filter. The existing double filter (12.5/12.5 acetate/DICO) is well accepted as far as the taste is concerned. However, great variations in dilution were observed. The problem encountered can be explained by the fact that the dilution zone is located just at the join of the two plugs.

J. Singer

ZDS/cap/AUGUST 25, 1981

0000144166

PROJECT NAME : V O I T T O

PROJECT NO : 358

PROJECT LEADER : ZDS

DATE : August 25th 1981

<u>PROTOTYPE NO</u>		6 P	8 P	BELMONT NO 1
<u>BLEND NO</u>		PMS	PMS	32 BEP (CIR 4-5 1981)
TA	%	1.93	1.80	1.63
NITRATE-NITROGEN	%	0.24	0.22	0.32
REDUCING SUGARS	%	7.1	8.7	1.2
FORMAT : DIAMETER	mm	7.97	7.99	7.97
FILTER LENGTH	mm	25	25	25
CIGARETTE LENGTH	mm	80	80	80
TOTAL WEIGHT	mg/cig.	895	907	862
TOBACCO WEIGHT AT 12 % O.V.	mg/cig.	581	589	529
CIGARETTE RTD	mm WG	71	68	156
DILUTION	%	72	72	47
CIGARETTE PAPER		Ecusta 708	Wattens 100	Wattens 60
TIPPING PAPER		5 M. 2.0.1.1	5 M. 2.0.1.1	Mechanically perforated
FILTER : TYPE		Double	Double	Double
TOW		2.5 Y / 48 / DICO	2.5 Y / 48 / DICO	2.5 Y / 75 / DICO
ADDITIVE		---	---	---
PAPER		FU-POV 100	FU-POV 100	FU-POV 150
RTD	mm	106	105	
DPM	mg/cig.	1.4	1.4	1.3
SN	mg/cig.	0.17	0.14	0.16
CU	mg/cig.	3.2	3.1	3.8
NO	mg/cig.	0.05	0.04	0.10
PUFF COUNT		8.2	8.3	6.7

THE CIGARETTES ARE SMOKED ON A PM 20 PORTS.

0000144167

PROJECT TITLE : CIGARETTE DEVELOPMENT 2
PERIOD COVERED : JUNE 27 - AUGUST 21, 1981
WRITTEN BY : Frattolillo-A. (ANF)

369 BEAUMONT

Objective

To reproduce and confirm the analytical values obtained with cigarette prototype No 12 T, previously produced at FTR, with the BEAUMONT cigarette produced at PMG Munich.

Tar (UK) : 4.5 mg/cig.
SN : 0.44 mg/cig.
CO : 6.8 mg/cig.

Description of samples and results

Using tobacco blend No GB0236905N02 (FTR) and the cigarette design of the prototype No 12 T (blind tested in the UK on November 14, 1980), two cigarette versions were produced at PMG Munich on July 23, 1981 and received by R & D at FTR for complete analysis to ascertain whether the tar delivery is within the proposed objective.

The design and the analytical results obtained with the two submitted versions are presented below :

	<u>Version No 1</u>	<u>Version No 2</u>
Tobacco blend	GB0236905N02 (FTR)	-----
Tobacco blend	NR-95 (PMG Munich)	-----
<u>Cut-filler :</u>		
TA	% 2.05	2.06
RS	% 8.5	8.6
N-NO ₃	% 0.22	0.23
Filter type	Acetate 2.5Y/48 with FU-POV 100 K	Acetate 2.5Y/48 with FU-POV 150 K
Cigarette paper	Mauduit 110-6	-----
Tipping paper	Malaucène 4 M. x 0.15 . 4.5	-----

0000144168

		<u>Version No 1</u>	<u>Version No 2</u>
<u>Cigarette format :</u>			
Diameter	mm	7.95	7.95
Filter total length	mm	25	25
Cigarette total length	mm	84.4	84.4
<u>Cigarette :</u>			
Total weight	mg/cig.	923	929
Tobacco weight	mg/cig.	644	649
Total RTD	mm WG	112	109
Filter RTD	mm WG	102	107
Dilution	%	48	52
Compressibility at 12 % moisture	mm	3.02	3.13
Filler density at 12 % moisture	mg/ml	221	222
<u>Smoke :</u>			
TPM	mg/cig.	6.8	5.9
DPM	mg/cig.	6.3	5.4
SN	mg/cig.	0.53	0.47
Tar "UK"	mg/cig.	5.8	4.9
CO	mg/cig.	6.8	5.7
NO	mg/cig.	0.13	0.12
Puff count		7.6	7.7

The cigarettes were smoked on a 20-port smoking machine to 37 mm butt length following the Coresta method.

0000144169

Comments

The BEAUMONT version No 2, even with a slightly higher tar delivery, appeared to be the only possible candidate for the first production day.

Following fluctuations in analytical values due to normal changes in blend quality, PMG Munich was immediately asked to collect and analyze, at intervals, BEAUMONT cigarettes produced during a production day (August 18, 1981). The analytical values of these cigarettes were right on target. Cigarettes were then taste tested by the Leaf experts in Lausanne who found the organoleptic characteristics of the product test to be within the objective.

As a preventive measure, PMG Munich was then asked to produce a few trays of BEAUMONT cigarettes by using Malaucène tipping paper type 6 M. x 0.15.4.5 to be analyzed in parallel with those produced like version No 2. The analytical results obtained showed that a 6-row tipping paper would not be feasible because this lowers the tar delivery too much. Should it become urgent to replace the 4-row tipping paper due to its too high tar delivery, a 5-row tipping paper should be considered.

To date, the objective BEAUMONT UK has been fulfilled and, the launching of the product is planned for mid-September.

Objective

To develop a MARLBORO cigarette of the Pan-European type by using a special flavour system, on tobacco only, thus eliminating flavoured filters, while conforming to the Hunter list.

Description of samples and results

Using the standard MARLBORO blend UK No G80120804N02 and the standard MLK CH construction, on the basis of prototype No 43 P version F (see report March-April 1981), another three prototypes were produced by varying the concentration of ingredients in the AC solution. The description and results of the above-mentioned prototypes are shown in the table below :

Prototype No:		50 P	51 P	52 T	MLK CH
Version		L	M	N	
<u>Cut-filler :</u>					
TA	%	11.88		1.87	1.85
RS	%	6.6		6.4	7.8
N-NO ₃	%	0.26		0.23	0.20
Filter type		MLK-PB-120 -----			
Cigarette paper		WP 60 -----			
Tipping paper		Z3 / 60 -----			
<u>Cigarette format :</u>					
Diameter	mm	7.95 -----			
Filter total length	mm	20 -----			
Cigarette total length	mm	84.4 -----			
<u>Cigarette :</u>					
Total weight	mg/cig.	1053	1049	1055	1065
Tobacco weight	mg/cig.	825	823	826	835
Total RTD	mm WG	103	103	94	99
Filter RTD	mm WG	66	63	96	65
Dilution	%	16	17	23	18
Compressibility at 12 % moisture	mm	3.18	3.21	3.18	3.51
Filler density at 12 % moisture	mg/ml	255	255	258	259

0000144171

Prototype No		50 P	51 P	52 T	MLK CH
Version		L	M	N	
<u>Smoke :</u>					
TPM	mg/cig.	17.4	17.8	16.6	20.0
DPM	mg/cig.	15.7	16.0	15.3	17.9
SN	mg/cig.	1.08	1.18	1.15	1.25
Tar "UK"	mg/cig.	14.6	14.8	14.2	16.6
CO	mg/cig.	17.6	17.7	16.1	17.4
NO	mg/cig.	0.27	0.27	0.24	0.23
Puff count		9.2	9.4	9.1	10.1

All the above prototypes were taste tested by Panel A who found prototype No 52 T version N to be the best alternative we ever had for an European MARLBORO blend (according to the Hunter list), especially as far as American blend characteristics are concerned. The decision for an immediate Panel D test was taken. The results of the test showed a clear preference for the MLK CH against the prototype, the latter being stronger and biting in taste.

Comments:

At this stage, everything concerning project TENNIS UK became confused and the situation called for a second Panel D tasting which is now under way.

This second test concerns TENNIS prototype No 53 P, representing the 100 % US version refused by Panel A at an earlier date (see "Test de dégustation" No FR-53, under prototype No 38 P version A, dated April 3, 1981), versus the current MLK CH.

If the outcome of this test is positive for the MLK CH then the feasibility of project TENNIS should be reviewed and rediscussed at the coming September meeting in Richmond.

Objective

To develop a low-tar cigarette delivering 4.0 mg tar, whose taste is not rejected by SILK CUT smokers, while conforming to the Hunter list.

Description of samples and results

For the task, a freshly prepared tobacco blend, the same as for HILTON prototype No 41-C 3 (MER Boost program), was used.

Six cigarette prototypes of different designs were produced and taste tested by Panel A. The Leaf experts preferred prototype No 1 P, this being mild, uniform and pleasant to smoke and more in line with an American blend cigarette than a Virginia one.

The construction and the analytical results of the chosen prototype are given below :

Prototype No	1 P
Version	B
Tobacco blend No	GB0229001R02
<u>Cut-filler :</u>	
TA	% 20
RS	% 11.2
N-NO ₃	% 0.17
Filter type	2.5 Y / 48 with FU-POV 100 K
Cigarette paper	MC-HP 5 (Fletcher)
Tipping paper	6 M. x 0.15.4.5

Cigarette format :

Diameter	mm	7.95
Filter total length	mm	25
Cigarette total length	mm	84.4

Cigarette :

Total weight	mg/cig.	1032
Tobacco weight	mg/cig.	763
Total RTD	mm WG	102
Filter RTD	mm WG	111
Dilution	%	54
Compressibility at 12 % moisture	mm	2.91
Filler density at 12 % moisture	mg/ml	259

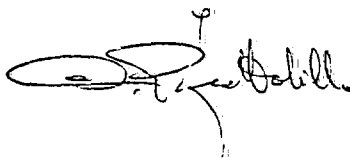
0000144173

Smoke :

TPM	mg/cig.	5.3
DPM	mg/cig.	4.9
SN	mg/cig.	0.46
Tar "UK"	mg/cig.	4.4
CO	mg/cig.	7.2
NO	mg/cig.	0.09
Puff count		8.9

Comments

Because of the PMS test results, it has been recommended not to test this cigarette in the UK.



ANF/cap/AUGUST 25, 1981

- 23 -

0000144174

PROJECT TITLE : CIGARETTE DEVELOPMENT 4
PERIOD COVERED : JULY 27 - AUGUST 25 1981
WRITTEN BY : Toimil-R. (RAT)

413 PALINKA

Objective

To reproduce the MPK brand in Hungary.

Summary

New prototypes were produced using different filters made at INM. They were taste evaluated by Panel A.

Description of samples and results

Prototype No		1: P	F 53
Blend		A	MAK 05
Filter version		I	MAKPC 120
Tar	mg/cig.	14.8	13.4
SN	mg/cig.	1.0	0.97
Puff count		9.3	9.0
Filter RTD	mm WG	76	73
Cigarette RTD	mm WG	118	141
TA	%	1.16	1.27
RS	%	12.8	9.5
N-NO ₃	%	0.10	0.15
N-NH ₃	%	0.12	0.13

Comments

These two prototypes (1 P and F 53) will be product tested in Hungary during September 1981.

Objective

To help the Russians to develop an American-type cigarette for their market.

Summary

Different blends and raw materials were sent by the Russians and analyzed at FTR.

Description of samples and results

In order to analyze and taste evaluate these different blends and raw materials, a series of prototypes was produced (see a description of these prototypes on the next page).

Comments

These prototypes were taste evaluated by the expert Panel A and three of them were selected to be presented in Moscow on September 9th 1981.

Follow-up

On the basis of prototypes Nos 9 P, 13 P and 23 P, 14 new prototypes will be produced and packed using all the possibilities offered by these different materials available.

Büni

RAT/cap/AUGUST 26, 1981

C O S M O S

Prototype	9 C 1	13 C 1	22 P	23 P	24 P	25 P	26 P	27 P	28 P	29 P	30 P	31 P	32 P
Blend	903	905	904	904	904	905	903	905	903	905	903	905	903
Burley Casing	EBC 8	---	EBC 8	EBC 8	EBC 8	---	EBC 8	---	EBC 8	---	EBC 8	---	EBC 8
After-Cut	EAC 74	ROK AC	ROK AC	EAC 74	DIK AC	ROK AC	EAC 74	ROK AC	EAC 74	ROK AC	EAC 74	ROK AC	EAC 74
Cig. paper	TERCIG	TERCIG	MAUDUIT	110-6	-----	-----	-----	-----	-----	CP RUSSIAN	----	MAUDUIT	110-6
Filter	MLF PC	-----	-----	-----	-----	-----	-----	RUSSIAN	-----	MLF PB	-----	-----	-----
Tipping glue	1516 G	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	RUSSIAN	-----

- 26 -

0000144177

PROJECT TITLE : CIGARETTE DEVELOPMENT 5
PERIOD COVERED : JULY 23 - AUGUST 20 1981
WRITTEN BY : Du Bois-J.-H. (JHD)

E U I C

Objective

- To establish a detailed study of our 1980 activities concerning "Marketing / Operations" and R & D projects.
- To study a system of planification which would enable each person concerned to know which things have to be done and when.

Results

The network and activity lists have been presented to the project leaders. This list will now be modified in order to include their specific needs.

Follow-up

The holiday period has prevented us from meeting with Hewlett-Packard and discussing their soft-ware and the possibilities of working all the projects in parallel. This meeting will be held on August 26th 1981.

The study of literature has showed that the GERT and VERT systems might be more interesting for us as they are network techniques using a probabilistic activity occurrence. These systems will be studied in more depth.

383 HELIUM

Objective

To produce a 100-mm cigarette with a total weight of less than 850 mg/cig.

Results

A MLH cigarette (7.90/25/99 mm format) with a total weight of 854 mg/cig. has been produced which gives a DPM of 12.0 mg/cig., a puff count of 8, a firmness of 4.97 mm and a dilution of 24 %.

Follow-up

Trials will continue for a more acceptable firmness.

386 COCONUT

Objective

DPM : 14 mg/cig.

CO : lower than 10 mg/cig.

The other characteristics remaining, if possible, the same as those of MLF.

Follow-up

Costar-transtube filters with a more porous plug wrap have just been received from Filtrona and trials will be carried out.

A US patent for reducing CO and nicotine by magnetised activated charcoal has been found and ordered.

M Dubois

JHD/cap/AUGUST 20, 1981

0000144179

PROJECT TITLE : MATERIAL DEVELOPMENT
PERIOD COVERED : JUNE 24 - AUGUST 27 1981
WRITTEN BY : Erkohen-E. (ELE)

1. NEW FILTRATION MATERIAL

1.1 Eastman 2.5/40.000 Y Tow

Objective

2.5/40.000 Y tow evaluation. Possible replacement of the existing 3.4/46.000 I tow by this item.

Summary

For an RTD of 375 mm WG an economy of 15% of cellulose acetate can be made by using this 2.5/40.000 Y tow. MLF-CH cigarettes were made with these filters and were compared with MLF-CH standard cigarettes. The trials were repeated twice (1). From the smoke delivery point of view, no difference was noted between trial and control cigarettes. The different panels gave contradictory opinions.

Follow-up

A mail-out test will be organized for the end of October. Based on the results of this mail-out test and the various former taste evaluations, a decision will be made concerning the introduction of this tow on the MLF-CH brand.

1.2 Eastman 8.0/64.000 Y and 8.0/80.000 R

Objective

Search for a new filtration material in order to attain the objective of project COCONUT (386).

Summary

Based on the results given by the cigarette construction model for project COCONUT, Eastman was asked to supply us with a 8.0 denier per filament tow with a high total denier. The two qualities mentioned above were proposed. The filter rods were produced by Eastman and sent to us for the trials.

Characteristics of the Filter Rods

The characteristics of the filter rods made by Eastman are given in the table below:

Tow Item	8.0/64.000 Y	8.0/80.000 R
Rod Length "mm"	108	108
Rod Ø "mm"	7.83 ± 0.03	7.83 ± 0.02
Filter Plug Wrap Permeability "K"	320	320
Filter Rod RTD "mm WG"	318 ± 9	334 ± 9
Plasticizer Type	Estrobond-B	Estrobond-B
Plasticizer Content "%"	7	8
Filter Rod Weight "mg"	1.043 ± 0.01	1.339 ± 0.02

Description of Samples and Results

MLF-CH cigarettes with 40% and 45% dilution were produced with these filters. The total RTD of the cigarettes achieved with these filters were respectively 75 and 70 mm WG. The results of the smoke analyses have not yet been received.

Follow-up

As soon as results of the smoke analyses are available, a special report will be written.

2. TIPPING PAPER

Ecusta Micro-mechanically perforated Tipping Paper

Objective

Possible replacement of the existing tipping paper on MLF-CH and MLK-CH by micro-mechanically perforated tipping paper.

Summary

The first two trials run on MLK-CH to substitute the existing 23/60 tipping paper were negative: the dilution levels were low compared to the standard. We asked Ecusta to increase the permeability of air of the tipping paper. We recently received three samples of micro-mechanically perforated tipping paper at different permeability levels.

Characteristics of the Tipping Papers

The physical characteristics of the tipping papers received are given in the table below.

	Ecusta TOD 9791	Ecusta TOD 9792	Ecusta TOD 9793
Length of Bobbin "mm"	48	48	48
Substance "g/m ² "	37.8	32.2	32.9
Thickness "mm"	0.050	0.040	0.043
Permeability of air "l/h 4 cm ² "	60.0	79.2	81.6
Perforation Position "mm"	12.0	15.0	13.5

Follow-up

The only sample that can be taken into account for this trial is TOD-9791. Because of the perforation position, trials cannot be carried out with the other tipping papers.

3. STUDY: COMPO

Objective

Determination of the influence of different cigarette paper parameters on the static burning time, puff count and smoke yield assuming constant tobacco characteristics.

Summary

In order to elucidate the influence of the cigarette paper parameters (permeability, fiber content, filler content and additive type) on the smoke yield, twenty five types of different cigarette papers were prepared in cooperation with De Mauduit. MLF-CH non-diluted cigarettes were made and smoked in order to determine the puff counts, static burning time and the smoke deliveries.

Follow-up

The results obtained are being studied and a special report will be issued.

4. ASSISTANCE TO PROJECTS

4.1. BUBBLE ULTRA

Based on the results given by the cigarette construction model, a 2.5/40.000 Y tow was proposed as a filtration material with a 70% dilution level, in order to comply with the objectives of this project.

4.2. ROSA

108 mm rods were made with 2.5/40.000 Y, 3.3/44.000 Y and 3.4/46.000 I tows. For each type of filter 3%, 5%, 7% and 10% of plasticizer were applied. Two different types of plasticizer were used at each application level: TEGDA and triacetin. The RTD level was kept constant for each type of filter rod.

References

1. Erkohen-E. Monthly Report (June 1981)

E. Erkohen

ELE/nod/SEPTEMBER 2 1981

0000144183

PROJECT TITLE : TOBACCO STUDIES
PERIOD COVERED : JULY 28 - AUGUST 27 1981
WRITTEN BY : Joseph-L. (LIJ)

TOBACCO LOT ANALYSES

Introduction of Inputs on EDP

Partial analytical results of twenty-six lots were introduced in the PME Analytical Data List.

Lots under Evaluation

Forty-two lots.

Lots Available, but not yet Analyzed

A hundred and twenty-seven lots.

Miscellaneous

As our capacity is considerably reduced due to the LIBRARY trials, a priority listing of the samples available is necessary. It is based on the elimination of lots of similar grades from the same suppliers. At this time, the analyses of nineteen FC samples, thirty-five BUR samples, eight OR samples and six reconstituted tobaccos have been postponed. This represents approximately half of the total number of samples available.

Among the lots under evaluation with a high priority, there are fourteen samples of US MD tobacco, 1980 crop. There seems to be a problem with their chemical analyses (TA too high).

ASSISTANCE TO OTHER PROJECTS

NINO Project

The analyses of the "RL sheet NINO" and of the corresponding base web are available.

The main differences of the base web compared with the "RL sheet NINO" are:

a) Sheet and Tobacco Analyses

- lower level of extractable substances (TA, RS, $\text{NH}_3\text{-N}$, K, Ash, Mg)
- higher level of Ca due to the lack of extractable substances
- higher filling power
- greater breaking resistance
- lower sheet density
- lower combustibility.

b) Cigarette Analyses

- lower tobacco weight
- greater firmness.

c) Smoke Analyses

- higher CO, NO, DPM, HCN, aldehyde deliveries and puff count per cigarette and per gram of burnt tobacco
- lower SN delivery per cigarette and per gram of burnt tobacco.

An estimate was made of the smoke delivery per gram of burnt "fiber" (non HWS material). The first results show that the CO and DPM deliveries are more or less similar and that the NO, HCN and aldehyde deliveries are higher for the base web. This NO result is surprising considering that the $\text{NO}_3\text{-N}$ levels of the two trials are similar.

LEAR Project

We have received one sample of BUR strips (control).

LIBRARY Project

The analyses of the first samples (normal TLA) of the second series of trials are under way.

MISCELLANEOUS

Maryland Tobacco, Influence of Storage (1)

This trial was made in order to determine whether the influence of the storage in the USA is the same as in Europe (Onnens). The examination of the tobacco is based on organoleptic and chemical characteristics. Two different grades of US MD tobacco have been tested. Ten samples of each grade were taken from Onnens and ten samples from the USA at the beginning of the storage (1979). A similar sample was taken after one year of storage.

The main differences due to the storage are:

- lower TA level, significant for the four trials
- lower Tot-N level, significant for three trials out of four
- lower NO₃-N level, significant for one trial out of four
- higher ash level.

It is difficult to see differences in the smoke analyses due to the different tobacco weights and RTDs of the trial cigarettes. Only the cigarettes of the 7XCBF/S grade stored at Onnens had small differences of tobacco weight and RTD. The smoke analyses per gram of burnt tobacco after one year of storage show:

- slightly higher CO delivery
- lower NO delivery
- slightly higher DPM delivery (this result does not appear to be confirmed by the DPM results of the other grade stored at Onnens)
- non significant difference in the SN delivery
- higher HCN delivery
- higher aldehyde delivery.

In general, the place of storage would not appear to have any influence on the chemical analyses.

Reference

1. Mr. Karlé's Report: "Chemical, Physical and Organoleptic Examination of MD Tobaccos..., of May 12, 1978", dated September 19th, 1978.

LIJ/nod/SEPTEMBER 3 1981

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0000144186

PROJECT TITLE : INGREDIENT AND FLAVOUR DEVELOPMENT
PERIOD COVERED : JULY 25 - AUGUST 25 1981
WRITTEN BY : Fatton-J.-P. (JPF)

401 / STEM

Objective

To improve the taste and quality of the stems.

Summary

The development was made on the same flue-cured stem blend as the one used for project ATLANTIC. Small batches of cut stems were sprayed in the laboratory. After the moisture stabilization, cigarettes were made by hand using TLA materials. These cigarettes were evaluated by Panel A and the comments are as follows.

- ESTC-6: Makes no improvement, gives a strange off-taste and does not significantly reduce the harshness.)
- ESTC-7: Makes no improvement, but does not add any off-taste. The harshness is not significantly reduced.
- ESTC-8: Same comments as for ESTC-7.
- MF-PC : Is the only alternative as far as softness and taste are concerned, makes a significant improvement in comparison with the untreated stem cigarettes.

Two versions have been retained up to now: ESTC-1 (1) and MF-PC.

Follow-up

Taking into consideration the possibility of also using SFC-DL-1 (Flavour Library) for this purpose, nine versions will be made using three different concentrations of each ingredient. The evaluation will no longer be made on hundred per cent stem cigarettes, but the stems will be added to the ATLANTIC blend at a level of 7%. All ingredients will also be tried on the ESTHER expanded stems.)

360 / MIAMI - FLORIDA

Objective

To develop an American blend cigarette for Switzerland which has to be as different as possible from MLF and well accepted by Maryland cigarette smokers.

Summary

Some modifications were made in the composition and application of the Burley casing, Burley top flavour and after-cutting solution.

Two new recipes were issued.

The cigarettes are not yet available.

208 / TENNIS

Objective

Fine tuning of the taste.

Summary

Taking into consideration the results of the Panel D test (prototype 52 versus MLK), three new recipes were issued in order to make the taste softer and more in line with the Swiss Marlboro.

The cigarettes have not yet been produced.

CONTACTS WITH SUPPLIERS

Three samples were received from Felton, G.B.

Reference

1. Fatton-J.-P. Monthly Report (June 25 - July 25 1981)

JPF/nod/SEPTEMBER 3 1981

0000144188

PROJECT TITLE : MATERIAL TESTING
PERIOD COVERED : JULY 29 - AUGUST 25 1981
WRITTEN BY : Balliger-P (PBA)

CIGARETTE PAPER

Mauduit 325 A Verge
Wattens E 1105

Pela 54 Mn is for the time being the only cigarette paper quality approved for use in the diluted Muratti family. In order to increase our sources of supplies, the above-mentioned cigarette papers were tested.

However, in spite of the acceptable smoke yields obtained with the cigarettes made with this new material, the subjective taste evaluation proved negative.

FILTRATION MATERIAL

Rhodia 5,0 / 38000 X black

This black tow was developed on the basis of the current 5,0 / 40000 X tow used in all the half-finished black filters containing charcoal.

The total denier was slightly decreased in order to conform more favourably with the specifications concerning resistance to draw.

The diluted Muratti cigarettes (MRA 08 ex PMH) produced with this material gave complete satisfaction as regards smoke yield and taste evaluation.

TIPPING PAPER

Cork-tipping standardization to US colour

In order to adapt the European cork tipping paper colour to that currently used in Richmond (more reddish), the following tests were performed:

<u>Affiliate</u>	<u>Brand</u>	<u>US Colour</u>
Berlin	undiluted Marlboro K.S.	Korkophan ex-Benkert
Berlin	diluted Marlboro K.S.	Z3/70 ex-Benkert
FTR	diluted Marlboro L.S.	Z3/60 ex-Benkert
FTR	diluted Marlboro L.S.	Z3/60 ex-Tann

With the exception of the undiluted MLK cigarettes produced in Berlin, the taste evaluation of the cigarette prototypes was negative. Consequently, the composition of the ink used in the different variants should be re-examined.

TECHNICAL SHEETS

Filter paper

No. 23 2533	Glatz	HF 40K-28/LN 60883
No. 23 2534	Glatz	HF 40K-28/LN 60886



PBA/edk/AUGUST 31 1981

PROJECT TITLE : CIGARETTE AND SMOKE ANALYSIS
 PERIOD COVERED : JULY 22 - AUGUST 24 1981
 WRITTEN BY : Senehi-F (SEF)

CIGARETTE INFORMATION REPORT

During this period, several cigarettes were diluted or their dilution was increased in order to decrease the tar, SN and CO values.

Brands	Printed values		Manufacturer	Country of sale
	Tar	SN		
Peter Stuyvesant 84/F	-	-	Rothmans	Belgium
Peter Stuyvesant Extra Mild 84/F	5.5	0.42	Rothmans	Belgium
Lux 84/F	12	0.8	Brinkmann	West Germany
MaryLong Naturel 80/F	14	1.0	BAT	Switzerland
MaryLong Extra 79/F	6	0.6	BAT	Switzerland

Brand	Tar (mg/cig)		SN (mg/cig)		CO (mg/cig)		Dilution (%)	
	N.V. (1)	F.V. (2)	N.V. (1)	F.V. (2)	N.V. (1)	F.V. (2)	N.V. (1)	F.V. (2)
Peter Stuyvesant	14.6	15.9	1.08	1.18	16.2	17.6	13	-
* Peter Stuy. E.M.	3.9	5.9	0.30	0.49	3.9	6.4	64	37
* Lux	9.7	11.8	0.64	0.80	12.1	14.8	19	-
* MaryLong	12.2	13.4	0.93	0.95	11.4	12.6	18	-
MaryLong Extra	6.2	7.1	0.50	0.63	9.6	10.9	36	23

(1) N.V. = New Version

(2) F.V. = Former Version

* For these brands, it is probable that the printed values will soon be brought down.

SEF/edk/AUGUST 31 1981

0000144191

PROJECT TITLE : QA ANALYTICAL SERVICES
PERIOD COVERED : JULY 22 - AUGUST 26 1981
WRITTEN BY : Widmer-A (ALW)

1.1. METHODS

- Determination of additives in cigarette paper

In connection with a request for the determination of additives in cigarette paper (see 3.12.) a HPLC method was developed. Using a column "AMINEX HPX-87" of 300 x 7.8 mm and sulfuric acid 0.1 n as an eluent, it is possible to determine simultaneously sulfate, phosphate, citrate, tartrate, formate and acetate. Only carbonate has to be determined in a separate analysis. Figure 1 shows the separation performance with the above-mentioned anions; figure 2 shows a typical chromatogram of a cigarette paper extract.

Further investigation showed that the separation performance on the column "AMINEX HPX-87" seems to be better than for example on a "LICHROSORB 10 RP8". Figure 3 shows a chromatogram with a mixture of sugars and acids theoretically present in aqueous tobacco extracts.

2.1. CASING KITCHEN

- FLT-PC (1)

The preparation procedure for the new FLT-PC solution was established.

- MERA-AC (1)

The preparation procedure was modified. The order of adding the ingredients was changed in order to simplify the preparation.

3.2.2. QUALITY CONTROL OF TOBACCO INGREDIENTS

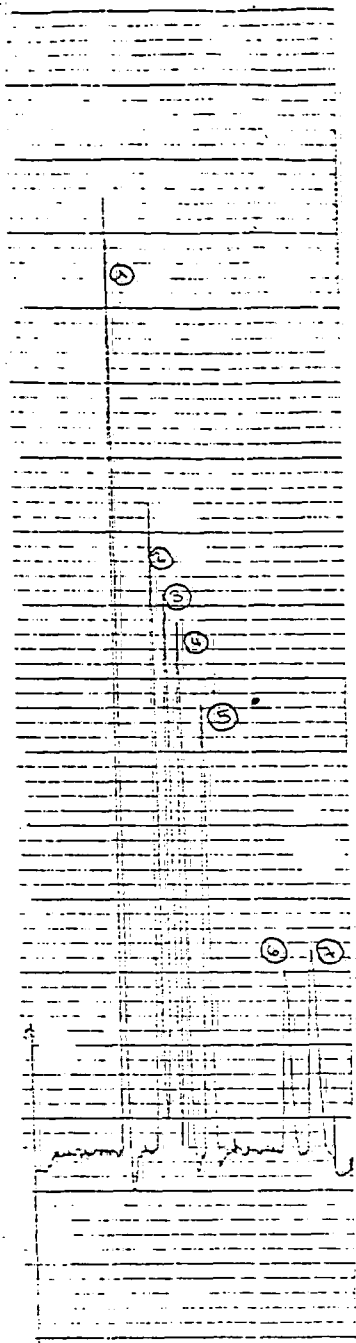
- Ingredients used in Bergen op Zoom for MLF-production (2)

Due to taste problems with MLF-cigarettes produced in March 1981, all the ingredients were submitted to an analytical control.

All the products corresponded to the specifications or were comparable with the preliminary shipments. Furthermore the applied solutions (PC, AC, Burley Casing, Burley TF) were up to standard.

FIGURE 1

- 1 Sulfate
- 2 Phosphate
- 3 Citrate
- 4 Tartrate
- 5 Malic acid (internal standard)
- 6 Formate
- 7 Acetate



02.09.81 ALW/edk

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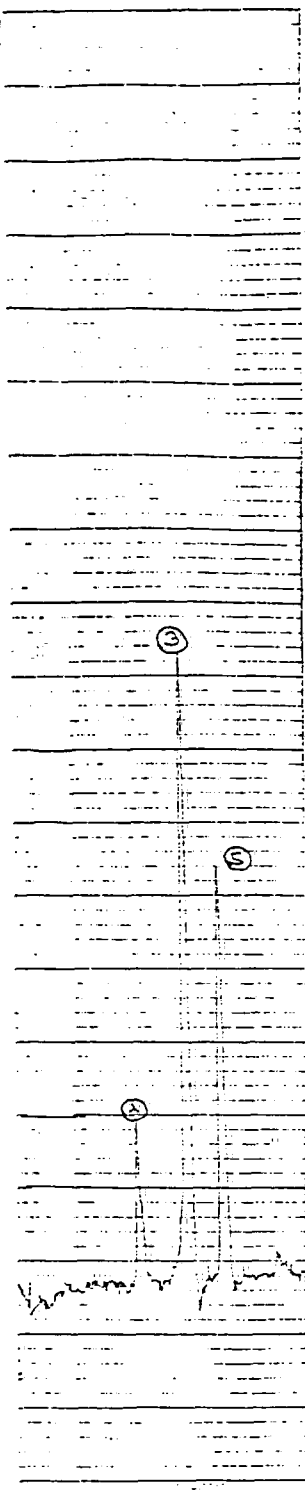


FIGURE 2

CIGARETTE PAPER EXTRACT

- 1 Sulfate
- 3 Citrate
- 5 Malic acid
(internal standard)

02.09.81 ALW/edk

- 43 -

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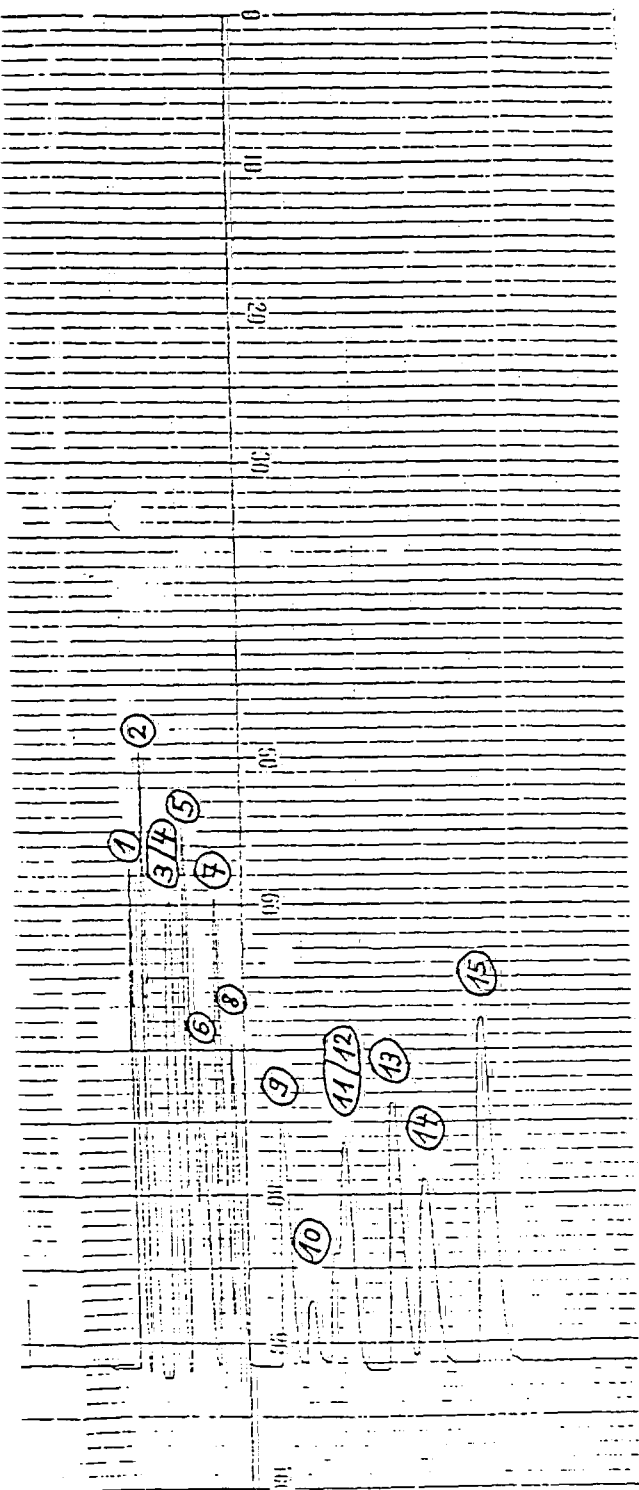


FIGURE 3

- 1 Sulfate
- 2 Oxalic acid
- 3 + 4 Phosphate + Saccharose
- 5 Citrate
- 6 Glucose
- 7 Fructose
- 8 Malonic acid
- 9 Succinic acid
- 10 Formate
- 11 + 12 Acetate + Glutaric acid
- 13 Propionic acid
- 14 Adipic acid
- 15 Butyric acid

- MF-AC Base

When irregularities in the product stocked in Holland were found, the stock in Onnens was examined. Olfactive tests and GC-fingerprints showed a difference between the MF-AC bases produced in 1979 and 1980.

MLF-cigarettes with the bases of the production periods in question were produced and submitted to a subjective evaluation (panel B). A significant difference between the two cigarettes was found. On the basis of this result, test-cigarettes with 50 % MF-AC base produced in 1979 and 50 % MF-AC base produced in 1980 were made. No significant difference was found in the subjective evaluation, neither in comparison with the production of 1979, nor with the production of 1980.

It was therefore decided to use up the 1979 stock by mixing it in a 50:50 ratio with the 1980 production

3.5.1. TRIALS WITH NEW SUPPLIES OF FILTER GLUES

- Liquid glue for KDF II (filter rod seam)
(LAESSER AG, Erlinsbach)

A series of trials on the machine with ten types of glues was organised.

Test-cigarettes were produced from five types which showed promising results on the machine. In the subjective evaluation (panel A) two types ("1793 D 2" and "1793 D 3") were considered as being up to standard. As the glue "1793 D 2" showed a better machineability than the type "1793 D 3", the trials will be continued with the first one.

3.12. QUALITY CONTROL OF CIGARETTE PAPER

- Determination of additives (4)

In 11 different types of paper, the anions were determined by HPLC and the cations (Mg, Ca, Na and K) by atomic absorption.


5.3. ASSISTANCE TO OTHER COUNTRIES

- Analyses for the ETNA-plant in PMG Munich
Humectants in tobacco (3 samples)
- Analyses for the ETNA-plant in PMH Bergen op Zoom
Humectants in tobacco (2 samples)

5.4. SERVICES FOR OTHER GROUPS

- Analyses for Process Development
 - SiO₂ in dust and tobacco (23 samples)
 - Chloride in tobacco (8 samples)
 - Ash-content of tobacco (8 samples)
 - K, Ca and Mg in tobacco (8 samples)
- Analyses for Product Development
 - Humectants in cigarettes (4 samples)

REFERENCES

- 1 Letter from Schwarb-A to the CASING KITCHEN (July 22 1981)
 - 2 Letter from Schwarb-A to Lopes-F (April 9 1981)
 - 3 Letter from Schwarb-A to Häusermann-M (April 9 1981)
 - 4 Letter from Keller-I to Erkohen-E (August 26 1981)
- 

Enclosures

ALW/edk/SEPTEMBER 3 1981

0000144197

PROJECT TITLE : SPECIFICATIONS
PERIOD COVERED : July 25 - August 28 1981
WRITTEN BY : Flury-C. (CAF)

1. FTR Switzerland

- New filter making specifications have been prepared for filter 34.7320 PMUPC, a dual acetate + Dico filter manufactured for PMG Munich, for project Gamma Ultra No 405.
- The Marlboro cigarette making specs (MLF 21 - MLK 15 - MLH 04 - MFM 03) have been modified in view of the second 3-month test with a standardized specific weight (at 12 %) and standardized AccuRay limits.
- On August 1, 1981, all dilution specs were changed to the new US value (range).
- A new packing version of the Brunette filter BRF 003 is sold in Poland.

2. PMH Holland

A new packing version of the Mercedes Specially Mild, MED 084, is sold in San Marino.

3. PMG Germany

- Since 3.8.1981, PMG Munich has produced Marlboros with an ETNA rate of 4 instead of 2 %. The corresponding cigarette-making specs (MLF 10 - MLK 30 - PLL 01) have been adapted accordingly.
- The first modified packing specs have been filed for the use of pack labels/blanks with "Warning..." text (sale Germany).
- Specs for new packing versions have been prepared for
 - Merit Filter, MER 049, sale Greece
 - Philip Morris Super Light PMS 070, sale Belgium
 - Philip Morris Super Light PMS 075, sale Luxemburg
- Following "Brand protection" type productions in 1980 and April, 1981, the sale of Merit has become official

in Great Britain. PMG Munich processes the tobacco (blend MG 005, with UK-type flavouring), on behalf of Weltab, Bruxelles, manufacturing the cigarettes.

- A complete set of specifications is available for project GAMMA-UK "BEAUMONT" No 369, Philip Morris Super Lights (cigarette PMS 02), for sale in Great Britain. The blend, PM 016, has UK flavouring, with four new recipes for Burley treatment and blend.
- A complete set of specifications is available for project GAMMA-DB, a Philip Morris Light American Blend cigarette, for sale in Germany. The cigarette is PMT 01. An existing blend and filter are used.
- A complete set of specifications is available for project GAMMA ULTRA, No 405, a Philip Morris Ultra Light cigarette (cigarette PMU 01), for sale in France. An existing filter and an existing blend are used. However the blend is treated with an increased amount of flavour.

4. WELTAB

- The cigarette making spec for Merit, MER 09, for sale in Great Britain, has been brought up to date.
- The cigarette making specs for MLF Marlboro (MLF 22-23) have been modified in view of the 3-month standardized weight and AccuRay test.

5. LAURENS SA GENEVA

The complete specs file of this licensee has been updated.

6. PME STANDARD RECIPES

The two recipes MERUK-PC and MERUK-AC have been re-issued, four other recipes have been completed (new Philip Morris cigarettes manufactured in Munich).

7. MATERIAL SPECIFICATIONS

Three other sections of the "Usage of material" book

have been updated and distributed (ingredients, tipping papers, glues).

Material specs have been submitted to :

- cigarette papers to Schoeller & Hoesch
- filter papers to Schoeller & Hoesch
- filters to Baumgartner SA
- tipping papers to Benkert GmbH

The modified material specs for the Benkert tipping papers contain several new denominations and correct paper substances, as agreed upon with the supplier.

8. SPECIFICATIONS ON EDP

The work of the project team, including representatives of FTR's purchasing, cost, production, PME personnel and a COMSERV specialist, as well as a SOPA representative, is supposed to start on 15.9.1981.

Druck

CAF/caf/AUGUST 28, 1981

PROJECT TITLE : PROCESS ASSURANCE
PERIOD COVERED : August 1 - August 31 1981
WRITTEN BY : Bel-T. (THB)

1. AccuRay - Tobacco Weights (1 and 2)

In a meeting, which took place in Neuchâtel on August 20 with representatives of FTR's Production Department and Quality Assurance Services, the following decisions were taken:

The new specified tobacco weights will be decreased by 2 % for all cigarettes produced in FTR, except the Marlboro family which is involved in the 3-month PME industrial test.

The lower mean weight limit will be fixed at 0,5 % instead of 2,5 %.

The lower limit of the cigarette rod (reject point) will be fixed at - 7,5 % of the new specified tobacco weight.

The FDC Fraction Defective Control will remain at 0,5 %.

This means, in practice, that the effective tobacco weight will change very little or not at all, compared with the previous situation.

The only real consequence will be an increased amount of light weight rejects > 0,5 %, especially for cigarettes with a low tobacco weight. For these brands, FTR will carry out special checks on the differences (physical and analytical parameters) between the cigarettes of the mean weight and those near the reject point.

The reason for this modification in FTR is the fact that the range in tobacco weights, between the lightest and the heaviest cigarette, is great (500 to 1100 mg). In the past, it was not possible to realize tobacco savings with AccuRay on brands with a low tobacco weight, as a standard deviation on the cigarette maker of 15-17 mg would have been required.

Quality-wise, the new system has the advantage of

producing a mean weight variation in a range of 0,5 % only, compared with the previous 2,5 %, regardless of whether the cigarette had been produced on a good or on a bad cigarette maker.

A graph showing the relationship between the specified tobacco weight-tobacco saving and the standard deviation was sent to all QA managers. It shows, for example, that the standard deviation of the maker must be at Z mg for a specified tobacco weight of X mg, if a tobacco saving of Y % is to be realized.

15. Quality Workshop (3)

The monthly report supplement, covering the month of June, has been sent to PME management and to the QA managers.

19. Quality Control Audit

The first parts of the questionnaire have been prepared in view of the second Quality Control Audit, which will be carried out in all production centers in autumn 1981.

- REFERENCES :
1. Modifications de spécifications
Grossen-E memo (August 1981)
 2. AccuRay: Relation between specified tobacco weight-tobacco saving-standard deviation
Bel-T memo to QA managers (August 1981)
 3. Quality workshop, monthly report supplement (August 1981)

T Rf

THB/caf/September 3, 1981

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0000144202

PROJECT TITLE : INSTRUMENTATION AND PROCESS
AUTOMATION

PERIOD COVERED : JULY 23 - AUGUST 22 1981

WRITTEN BY : Thévoz-M. (MIT)

Automation of the Smoking Laboratory

A method for reducing the amount of hardware necessary for the smoking machines' link-up is currently being studied. It involves the use of an interface which analyses simultaneously the state of the 20 micro-switches present on each of the smoking machines and whose function is to stop the smoking.

The electronic interface we are developing will be linked to a modular micro-computer, HP 9915, which will increment the various puff counters. The latter will be stored in the form of indexed variables (data array) and will be kept in the memory until the next smoking. The HP 1000 computer will read periodically, when it has the time available, the HP 9915 tables to introduce into the data base the number of puffs of the brands of cigarettes analysed.

RTD/DIL Data Processing

At the present time, two programmes are available for processing physical data : "RTDIL" and "REPORT". Manual keyboard input enables the processing of daily and monthly results. The manual input deals with the following data :

- cigarette code;
- reference code of the production machine;
- average RTD value of a sampling of 10 cigarettes with the corresponding standard deviation (S-RTD);
- mean value and standard deviation of the dilution of the same sample (DIL and S-DIL).

The "RTDIL" programme for daily processing enables the above-mentioned physical data to be recorded for several brands on different machines (limit of 25 brands - machines) and performs the following functions :

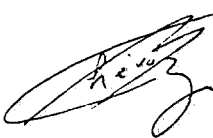
- a) Permanent storing of the last 10 measuring points for each brand - machine;
- b) Permanent display on a screen of the RTD/DIL averages, estimated standard deviations, minimums and maximums obtained during the day of all the reference brands - machines;
- c) Automatic checking of the validity of all the numerical input as compared with the specifications of the brand. Identification on a screen of any off-range values;
- d) Checking of the validity of all the cigarette codes and machine's references introduced via the keyboard;

- e) Correction of all the individual values in the memory using a pass-word;
- f) Graphic screen editing of the RTD/DIL tendencies of the brand - machine values stored in the memory;
- g) Automatic out-put of the daily report with the graphs and mean RTD/DIL values for all the brands produced during the day.

The "REPORT" programme enables the monthly values of all the brands to be computed by processing the untreated values stored on magnetic tape. This computation is carried out automatically by a process which gives access to the following information :

- (i) Day to day graphic report of five different brands with the tendencies of the daily RTD and DIL averages;
- (ii) Averages and standard deviations of RTD and DIL values of all the brands produced during the month;
- (iii) Month to month graphical report of the last twelve months of all the brands produced at Serrières.

These two programmes will be tested and optimized by the users from September 14 1981 onwards.



PROJECT TITLE : PATENTS
PERIOD COVERED : July 17 - August 16, 1981
WRITTEN BY : Mandiratta-J-C. (MJA)

PROJECT EXIT

We have been informed by the West German Patent Office that Brown & Williamson's Offenlegungsschrift 3011959 has been rejected by the patent office with effect to the patent office action letter, dated July 31, 1981. A copy of this letter will be sent to the Netherlands and Swedish Patent Offices to support our opposition in both these patent offices.

NEW PATENT ISSUED

West German Auslegeschrift 28 11 690
Process for the Reduction of Nitrates and Nitrites in Tobacco.

PME PATENT COMMITTEE MEETING

This year's third PME Patent Committee Meeting was held in Neuchâtel on August 26, 1981. A separate protocol will be sent to everyone concerned.

CANDIDA "BY PASS" - NEW APPLICATION

The final draft of this application has been sent to Dr. Hach following the inventor's approval for filing a priority application in West Germany.

PATENT DOCUMENTATION

To date, 9000 documents are on STAIRS system for patent documentation.

Handwritten signature

MJA/mle/August 16, 1981

0000144205

PROJECT TITLE : LEGISLATION
PERIOD COVERED : AUGUST 1981
WRITTEN BY : Fink-W. (WAF)

PESTICIDES

The current West German regulation on maximum pesticide residues in and on tobacco products ("Degree for the use of Pesticides in or on Foodstuff of Vegetable Origin and Tobacco Products") of June 13, 1978, will be amended. The new Pesticide Regulation will become effective on January 1, 1982. Tobacco products are not affected by the amendments of the new regulation.

MAK-VALUES

The MAK-values for 1982 (maximum permissible concentration of noxious compounds) have been issued by the German "Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe". In consequence of T. Hirayama's recent publication (Brit. med. J. 282, 183 (1981), "Passive Smoking" has been included on page 5 of the MAK-list.

L.F.1

WAF/jig/AUGUST 21 1981

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SEP 17 1981

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